Effective Health Care

Screening and Diagnosis of Persons with Multiple Myeloma
Nomination Summary Document

Results of Topic Selection Process & Next Steps

- The topic, *Screening and Diagnosis of Persons with Multiple Myeloma,* was found to be addressed by three evidence-based clinical practice guidelines. Given that the guidelines cover this nomination, no further activity will be undertaken on this topic.
  - Bird JM, Behrens J, et al. UK Myeloma Forum (UKMF) and Nordic Myeloma Study Group (NMSG): guidelines for the investigation of newly detected M-proteins and the management of monoclonal gammopathy of undetermined significance (MGUS). Br J Haematol. 2009 Oct;147(1):22-42.
  - Bird JM, Owen RG, D'Sa S, et al. Guidelines for the diagnosis and management of multiple myeloma 2013. London (UK): British Committee for Standards in Haematology (BCSH); 2013. 99 p.
  - National Institute for Health and Clinical Excellence (In progress). Myeloma: Diagnosis and management of myeloma. Expected 2016. Accessed on May 21, 2014 at: https://www.nice.org.uk/Guidance/InDevelopment/GID-CGWAVE0669

Topic Description

Nominator(s): Individual

Nomination Summary: The nominator is an individual with a family history of multiple myeloma. Two family members were diagnosed at different stages of their lives (65 years old and 75 years old). The nominator is interested in whether this increases the risk for multiple myeloma for herself and other family members. She also would like to know if any screening methods can detect multiple myeloma early.

Staff-Generated PICO for Key Question 1
Population(s): Individuals who may be at increased risk for multiple myeloma
Intervention(s): Screening tests
Comparator(s): Different screening tests compared to each other or no screening
Outcome(s): Shorter time to diagnosis; early detection

Staff-Generated PICO for Key Question 2
Population(s): Individuals who may be at increased risk for multiple myeloma
Intervention(s): Diagnostic tests and diagnostic strategy
Comparator(s): Different diagnostic tests/strategies compared to each other or no screening
Outcome(s): Lower stage at diagnosis; improved survival

Key Questions from Nominator:

1. What is the effectiveness of screening tests for multiple myeloma for individuals who may be at high risk?

2. What is the effectiveness of various diagnostic tests to diagnose multiple myeloma?

Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/.)
- Though it is relatively uncommon cancer in general, multiple myeloma is the second most common type of blood cancer in the US with a five-year survival rate of 45%.
- Multiple myeloma is rarely diagnosed early because individuals are asymptomatic until they reach advanced stages of the disease, and early symptoms are often attributed to other diseases.
- The majority of people diagnosed with multiple myeloma are 65 years or older. It is also slightly more common in men than in women and in African-Americans than in white Americans.
- In addition to increasing age, family history may be a risk factor. Someone who has siblings or a parent with multiple myeloma has a four-fold increase in risk. However, most people with the disease do not have relatives affected by it.
- Other risk factors include a previously diagnosed blood disorder. In almost all individuals myeloma is preceded by an asymptomatic monoclonal gammopathy of undetermined significance.
- At this point, no screening method has been proven effective in improving outcomes in multiple myeloma. Screening populations for M-proteins to detect MGUS was not recommended by the UK Myeloma Forum and Nordic Myeloma Study Group, in their guidelines for management of MGUS.
- The topic was also found to be addressed by a clinical practice guideline published by the Haemato-oncology Task Force of the British Committee for Standards in Haematology entitled *Guidelines for the diagnosis and management of multiple myeloma (2013)*, which outlined the diagnostic workup and recommendations for care of individuals with multiple myeloma. This was based on a literature review covering up to April 2013, as well as expert consensus. The guideline recommends full blood count and X-ray of symptomatic areas, among other tests in the work-up. It also recommends diagnostic methods, including a skeletal survey, among other methods.
- The topic is also covered by an in-progress clinical practice guideline from NICE entitled *Myeloma: Diagnosis and management of myeloma*, which is expected to be released in 2016. Key evidence questions in the NICE guideline cover laboratory testing and investigations of myeloma, including immunophenotying and molecular genetic testing. It also includes questions on the optimal imaging strategy and treatment decisions in newly diagnosed asymptomatic myeloma.